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REMARKS

Instant claims 1-7, and 10-18 stand pending in the instant Application. The instant claims 10-14 are withdrawn by the Examiner.

Claim Rejections: 35 U.S.C. §112

Claims 16 and 17 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

With respect to claim 16 and the comments presented in the Office Action of April 30, 2009, page 4, second paragraph: Applicants have already amended claim 16 to recite 0.078 wt % in the Response to office Action submitted on June 23, 2008. The format of the amendment was considered Non-Compliant (see Notice of Non-Compliant Amendment, July 29, 2008). The format of the amendment was timely corrected in a Response to Notification of Non-Compliant Amendment submitted on August 27, 2008. The Non-Final rejection of claims from the Examiner on December 3, 2008 included the 35 U.S.C §112 rejection of claim 16, but failed to discuss or acknowledge Applicants' amendment in the section titled "Response to Arguments" (page 7). In the following Response to Office Action (March 3, 2009), Applicants addressed the absence of any acknowledgement of the amendment to claim 16, stating: "The 35 U.S.C. §112 rejections were previously addressed (Response to Office Action of June 23, 2008). Since these rejections are not mentioned in the Response to Arguments, Applicants believe these rejections have been overcome." Despite this statement, the Final Office Action of April 30, 2009 still provides no acknowledgement of the amendment and continues to repeat the same wording for the rejection. Applicants request acknowledgement of amendment to claim 16 and confirmation that such amendment has, indeed, been entered. The 35 U.S.C. §112 rejection with respect to claim 16 should be withdrawn.

With respect to claim 17, Applicants assert that Example 2 (page 18 of the specification) does provide support for an initial amount of 0.03 wt % (based on dry polymer weight) during the first 10 wt % (based on dry polymer weight) of monomer conversion as recited in claim 17. While the presence of chain transfer agent (in the amounts recited in the claim) is required in claim 1 (also claim 16), it is not excluded from being present in claim 2 or claim 17. Moreover, the specification specifically states

that this is the case: "A chain transfer agent such as, for example, isopropanol, halogenated compounds, n-butyl mercaptan, n-amyl mercaptan, n-dodecyl mercaptan, t-dodecyl mercaptan, alkyl thioglycolate, mercaptopropionic acid, and alkyl mercaptoalkanoate in an amount of from 0.001 to 0.05, preferably from 0.0025 to 0.05 moles per kg dry polymer weight, is used in the first aspect of this invention. In the second aspect of this invention chain transfer agent is not required but in some embodiments it is used in an amount of from 0.001 to 0.05, preferably from 0.0025 to 0.05, moles per kg dry polymer weight." (see specification, page 8, lines 8-15; claim 17 refers to the second aspect of the invention – see page 3, lines 10-26). The 35 U.S.C. §112 rejection with respect to claim 17 should be withdrawn.

Claim Rejections: 35 U.S.C. §102(b) /103

Claims 2-5, 7 and 17 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Friel (U.S. 5,731,377), hereafter "Friel".

The rejection has cited case law to support the contention that "even though the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself". Given this rule, the instantly recited process begets a different polymer than a polymer made from the same monomer mixture by the process of Friel and the rejection should be withdrawn.

The rejection, to be proper, must provide evidence that the product produced in Friel is the same as the product produced by the current inventive process and has failed to do this. Applicants have already produced data showing that the products are not the same. In the Declaration of Ralph C. Even of December 21, 2007, applicants provided chromatograms comparing pairs of polymers: in each case, one polymer prepared via the inventive process of the instantly recited claims, the other polymer prepared using a comparative process. The chromatograms showed that for each pairing, the inventive process has a much more pronounced elution due to low molecular weight polymers. The chromatograms were presented to demonstrate that the products of the inventive process are different to those made in Friel. Such was acknowledged on the record by the Examiner following presentation of the chromatograms at a personal interview (August

15, 2007). The chromatograms were originally presented in color with the key also in color. Applicants submitted a further Declaration of Ralph C. Even, under Rule 132, dated March 3, 2009, which re-produced the chromatograms (of the unformulated polymers) for purposes of clarification for the record.

Additionally, the Declaration of March 3, 2009 provided further support, by way of scrub resistance data, that the products are not the same. For example, scrub resistance data was obtained for paints made from polymer AH-301 and polymer AH-303. AH-301 is the polymer of Friel's Example 3, cited as art, prepared in identical fashion to that in Friel. AH-303 has the same polymer composition (monomer types and amounts) as Friel's Example 3, but is prepared by the inventive process. For the scrub resistance data, it should be noted that, contrary to the Examiner's statements (Office Action of April 30, page 4, third paragraph), these two polymers were identically formulated with exactly the same amount and type of rheology modifier (Declaration of March 3, 2009, Appendix B). Like the chromatograms (of the unformulated polymer), the scrub resistance data (for these and other inventive-comparative pairs) clearly show that the polymer obtained by the inventive process is not the same as that prepared by the cited art process.

The §102(b) rejection is, therefore, clearly improper and should be withdrawn.

Claim Rejections: 35 U.S.C. §103(a)

In the alternative, claims 2-5, 7 and 17 stand rejected under 35 U.S.C. §103(a) as obvious over Friel.

Applicants' original specification shows evidence of unexpected results for the products of the product-by-process claims (see, for example Table 4.1 in Example 4 on page 20 of the specification), and thus, the product resulting from the inventive process is not obvious with respect to Friel. The rejection has suggested that Applicants have not shown criticality for the presently claimed process on the final product, and the data submitted by Applicants has been found to not be reasonably commensurate in scope with the claimed invention with respect to amounts of initiator added during the first 10 wt % of monomer conversion.

The data submitted with the Declaration of Ralph C. Even of March 3, 2009 show that significantly improved scrub resistance may be obtained in the product of the

inventive product-by-process of the instantly recited claims compared to the product from the product-by process of the cited art. The product resulting from the inventive process is clearly different and the superior scrub resistance is unexpected considering the two polymers in each polymer pair have the same composition of monomers and are identically formulated. The criticality of the presently claimed process on the final product is well supported; compare, for example, the three pairs of polymers represented by polymers 1-6. For each pair, the product resulting from the inventive product-by-process of the instantly recited claims has superior scrub resistance compared to that resulting from the identically formulated product-by process of the cited art. Moreover, Applicants have presented data that is reasonably commensurate in scope with the claimed invention.

Case law holds that data may be reasonably commensurate in scope with the claimed invention if a skilled artisan "could ascertain a trend in the exemplified data that would allow him to reasonably extend the probative value thereof." *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). The Declaration of Ralph C. Even of March 3, 2009 states that the data presented is sufficient for one skilled in the art to establish a reasonable correlation between the showing and the entire scope of the claim.

Moreover, case law also holds that "appellant is not required to test each and every species within the scope of the appealed claims." *Ex parte Winters*, 11 U.S.P.Q.2d 1387, 1988 Pat. App. LEXIS 39, *4 (B.P.A.I. 1989). "Rather, patentability is established by a showing of unexpected superiority for representative compounds within the scope of the appealed claims." *Id.* at *4-*5.

With respect to claim 2, the rejection has stated that "the exemplified amounts of initiator added during the first 10 wt % of monomer conversion (20, 23, 20, 10, 35, and 22.2 wt %) are not reasonably commensurate in scope with claimed less than half (i.e., 50 wt %)." The invention disclosed by the applicants is directed to a new and inventive process for the polymerization. Conventionally, the initiator is added at the start of the polymerization (because it "initiates" or starts the polymerization reaction). Applicants have provided data points for which less than half of the initiator is added during the first 10 wt % of monomer conversion; specifically, amounts of initiator equal to 20, 23, 20, 10, 35, and 22.2 wt %. One skilled in the art would reasonably conclude from this body

of data that the inventive process provides polymers exhibiting unexpected results when less than half of the initiator is added during the first 10 wt % of monomer conversion.

Applicants respectfully submit that the data presented "establish the correlation between" the claimed compositions and desirable properties, and that in cases where the data do not reach claimed limits, "no factual basis appears in the record for expecting the compounds to behave differently" beyond the range of the data. *In re Cescon*, 474 F.2d 1331, 1334 (C.C.P.A. 1973). Applicants believe that their invention provides superior properties over the ranges disclosed in the specification.

Therefore, Applicants respectfully submit that their demonstration of unexpected results would overcome any suggestion of obviousness with respect to Friel. Friel neither teaches nor suggests how to obtain a product such as that obtained by the process of the instantly recited claims.

The §103(a) rejection of claims 2-5, 7 and 17 as obvious over Friel should be withdrawn.

Claim Rejections: 35 U.S.C. §103(a)

Claim 6 stands rejected under 35 U.S.C. §103(a) as obvious over Friel. Claims 1, 3-7, and 16 stand rejected under 35 U.S.C. §103(a) as obvious over Friel in view of Ishikawa (US 4,325,856, "Ishikawa"). Claim 15 stands rejected under 35 U.S.C. §103(a) as obvious over Friel in view of Ishikawa and further in view of Bricker (US 5,502,089, "Bricker"). Claim 18 stands rejected under 35 U.S.C. §103(a) as obvious over Friel in view of Bricker.

Applicants contend that if claim 2 is patentable in light of Friel, then claims 1, 3-7 and 16 are also patentable over Friel in view of Ishikawa. Moreover, Applicants contend that if independent claim 2 is both novel and inventive, then the dependent claims are also patentable.

Reconsideration of Restriction Requirement:

The original application included claims 1-9. The applicants had cancelled claims 8 and 9, and submitted new claims 10-14. Claims 10-14 were withdrawn from consideration by the Examiner as being directed to a process of making the composition of instant claims 1-7. However, a composition and the method of making the same are considered to be one and the same invention. See *In re Ochiai*, 71 F.3d 1565 (Fed. Cir. 1995). Applicants have insured that instant claim 10 includes all of the limitations of instant claim 2. Accordingly, Applicants hereby respectfully request the rejoinder of Group I, claims 1-7, and Group II, claims 10-14 upon an indication of the allowability of the instant composition claims. See MPEP 8.21.04, 1st two paragraphs.

CONCLUSION

Based on the foregoing remarks, the instant claims are believed to be in condition for allowance. Applicants' agent thanks the Examiner for the time taken to review this response.

Respectfully submitted,

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